

NHL-NP-46 Sequence Listing (revision 1).ST25 SEQUENCE LISTING

```
Fuertes-Lopez, Laura
<110>
       Timon-Jimenez, Marcos
       DNA EXPRESSION CONSTRUCT FOR TREATMENT OF INFECTIONS WITH
<120>
       LEISHMANIASIS
       NHL-NP-46
<130>
<140>
       10/816,591
       2004-04-01
<141>
       DE 101 48 732.0
<150>
       2001-10-02
<151>
<150>
       DE 101 56 679.4
       2001-11-12
<151>
<150>
       PCT/DE02/03799
       2002-10-02
<151>
<160>
<170> PatentIn version 3.2
<210>
       4791
<211>
<212>
       DNA
<213>
       Plasmid pSCp36
<220>
<221>
       misc_feature
       (193\overline{9})..(1045)
<222>
       Kanamycin resistance, reverse complementary
<223>
<220>
       promoter
<221>
<222>
<223>
       (2447)..(3243)
       CMV
<220>
<221>
       Intron
<222>
       (3250)..(3386)
<220>
       misc_feature (3393)..(4331)
<221>
<222>
<223>
       p36 protein
<220>
<221>
       polyA_site
       (4338)..(4539)
<222>
       poly A site aus SV 40
<223>
<400>
tcttccqctt cctcgctcac tgactcgctg cgctcggtcg ttcggctgcg gcgagcggta
                                                                            60
tcagctcact caaaggcggt aatacggtta tccacagaat caggggataa cgcaggaaag
                                                                           120
aacatgtctc gggaggcctc acgtgacatg tgagcaaaaag gccagcaaaa ggccaggaac
                                                                           180
```

cgtaaaaagg	Ni ccgcgttgct	HL-NP-46 Sec ggcgtttttc	quence Listi cataggctcc	ing (revision gcccccctga	on 1).ST25 cgagcatcac	240
aaaaatcgac	gctcaagtca	gaggtggcga	aacccgacag	gactataaag	ataccaggcg	300
tttccccctg	gaagctccct	cgtgcgctct	cctgttccga	ccctgccgct	taccggatac	360
ctgtccgcct	ttctcccttc	gggaagcgtg	gcgctttctc	atagctcacg	ctgtaggtat	420
ctcagttcgg	tgtaggtcgt	tcgctccaag	ctgggctgtg	tgcacgaacc	ccccgttcag	480
cccgaccgct	gcgccttatc	cggtaactat	cgtcttgagt	ccaacccggt	aagacacgac	540
ttatcgccac	tggcagcagc	cactggtaac	aggattagca	gagcgaggta	tgtaggcggt	600
gctacagagt	tcttgaagtg	gtggcctaac	tacggctaca	ctagaaggac	agtatttggt	660
atctgcgctc	tgctgaagcc	agttaccttc	ggaaaaagag	ttggtagctc	ttgatccggc	720
aaacaaacca	ccgctggtag	cggtggtttt	tttgtttgca	agcagcagat	tacgcgcaga	780
aaaaaaggat	ctcaagaaga	tcctttgatc	ttttctacgg	ggtctgacgc	tcagtggaac	840
gaaaactcac	gttaagggat	tttggtcatg	agattatcaa	aaaggatctt	cacctagatc	900
cttttaaatt	aaaaatgaag	ttttaaatca	atctaaagta	tatatgagta	aacttggtct	960
gacagttacc	aatgcttaat	cagtgaggca	cctatctcag	cgatctgtct	atttcgttca	1020
tccatagttg	cctgactccc	cgtctcagaa	gaactcgtca	agaaggcgat	agaaggcgat	1080
gcgctgcgaa	tcgggagcgg	cgataccgta	aagcacgagg	aagcggtcag	cccattcgcc	1140
gccaagctct	tcagcaatat	cacgggtagc	caacgctatg	tcctgatagc	ggtccgccac	1200
acccagccgg	ccacagtcga	tgaatccaga	aaagcggcca	ttttccacca	tgatattcgg	1260
caagcaggca	tcgccatggg	tcacgacgag	atcctcgccg	tcgggcatgc	tcgccttgag	1320
cctggcgaac	agttcggctg	gcgcgagccc	ctgatgctct	tcgtccagat	catcctgatc	1380
gacaagaccg	gcttccatcc	gagtacgtgc	tcgctcgatg	cgatgtttcg	cttggtggtc	1440
gaatgggcag	gtagccggat	caagcgtatg	cagccgccgc	attgcatcag	ccatgatgga	1500
tactttctcg	gcaggagcaa	ggtgagatga	caggagatcc	tgccccggca	cttcgcccaa	1560
tagcagccag	tcccttcccg	cttcagtgac	aacgtcgagc	acagctgcgc	aaggaacgcc	1620
cgtcgtggcc	agccacgata	gccgcgctgc	ctcgtcttgc	agttcattca	gggcaccgga	1680
caggtcggtc	ttgacaaaaa	gaaccgggcg	cccctgcgct	gacagccgga	acacggcggc	1740
atcagagcag	ccgattgtct	gttgtgccca	gtcatagccg	aatagcctct	ccacccaagc	1800
ggccggagaa	cctgcgtgca	atccatcttg	ttcaatcata	atattattga	agcatttatc	1860
agggttattg	tctcatgagc	ggatacatat	ttgaatgtat	ttagaaaaat	aaacaaatag	1920
gggttccgcg	cacatttccc	cgaaaagtgc	cacctgacgt	ctaagaaacc	attattatca	1980
tgacattaac	ctataaaaat	aggcgtatca	cgaggccctt	tcgtctcgcg	cgtttcggtg	2040
atgacggtga	aaacctctga	cacatgcagc	tcccggagac Page	ggtcacagct 2	tgtctgtaag	2100

.....

NHL-NP-46 Sequence Listing (revision 1).ST25

cggatgccgg	gagcagacaa	gcccgtcagg	gcgcgtcagc	gggtgttggc	gggtgtcggg	2160
gctggcttaa	ctatgcggca	tcagagcaga	ttgtactgag	agtgcaccat	atgcggtgtg	2220
aaataccgca	cagatgcgta	aggagaaaat	accgcatcag	gcgccattcg	ccattcaggc	2280
tgcgcaactg	ttgggaaggg	cgatcggtgc	gggcctcttc	gctattacgc	cagctggcga	2340
aagggggatg	tgctgcaagg	cgattaagtt	gggtaacgcc	agggttttcc	cagtcacgac	2400
gttgtaaaac	gacggccagt	gccaagcttg	gtctcctccc	ggatcctcaa	tattggccat	2460
tagccatatt	attcattggt	tatatagcat	aaatcaatat	tggctattgg	ccattgcata	2520
cgttgtatct	atatcataat	atgtacattt	atattggctc	atgtccaata	tgaccgccat	2580
gttggcattg	attattgact	agttattaat	agtaatcaat	tacggggtca	ttagttcata	2640
gcccatatat	ggagttccgc	gttacataac	ttacggtaaa	tggcccgcct	ggctgaccgc	2700
ccaacgaccc	ccgcccattg	acgtcaataa	tgacgtatgt	tcccatagta	acgccaatag	2760
ggactttcca	ttgacgtcaa	tgggtggagt	atttacggta	aactgcccac	ttggcagtac	2820
atcaagtgta	tcatatgcca	agtccgcccc	ctattgacgt	caatgacggt	aaatggcccg	2880
cctggcatta	tgcccagtac	atgaccttac	gggactttcc	tacttggcag	tacatctacg	2940
tattagtcat	cgctattacc	atggtgatgc	ggttttggca	gtacaccaat	gggcgtggat	3000
agcggtttga	ctcacgggga	tttccaagtc	tccaccccat	tgacgtcaat	gggagtttgt	3060
tttggcacca	aaatcaacgg	gactttccaa	aatgtcgtaa	taaccccgcc	ccgttgacgc	3120
aaatgggcgg	taggcgtgta	cggtgggagg	tctatataag	cagaggtcgt	ttagtgaacc	3180
gtcagatcac	tagaagcttt	attgcggtag	tttatcacag	ttaaattgct	aacgcagtca	3240
gtgctcgagc	aggtaagtat	caaggttaca	agacaggttt	aaggaggcca	atagaaactg	3300
ggcttgtcga	gacagagaag	actcttgcgt	ttctgatagg	cacctattgg	tcttactgac	3360
atccactttg	cctttctctc	cacaggggta	ccatgaacta	cgagggtcac	ctgaagggcc	3420
accgcggatg	ggtcacctcc	ctggcctgcc	cgcagcaggc	ggggtcgtac	atcaaggtgg	3480
tgtcgacgtc	gcgcgatggc	acggccatct	cgtggaaagc	caaccccgac	cgccacagcg	3540
tggacagcga	ctacggtctg	ccgagccacc	gcctcgaggg	ccacaccggc	ttcgtgtcgt	3600
gtgtgtcgct	ggcccacgcc	accgactacg	cgctgaccgc	gtcctgggac	cgctccatcc	3660
gcatgtggga	cctgcgcaat	ggccagtgcc	agcgcaagtt	cctgaagcac	accaaggacg	3720
tgctcgccgt	cgccttctcg	ccggacgacc	gcctgatcgt	gtccgcgggc	cgcgacaacg	3780
tgatccgcgt	gtggaacgtg	gcgggcgagt	gcatgcacga	gttcctgcgc	gacggccacg	3840
aggactgggt	gagcagcatc	tgtttctcgc	cgtcgctgga	gcatccgatc	gtggtgtccg	3900
gcagctggga	caacaccatc	aaggtatgga	acgtgaacgg	gggcaagtgt	gagcgcacgc	3960

```
NHL-NP-46 Sequence Listing (revision 1).ST25
                                                                      4020
tcaagggcca cagcaactac gtgtccacgg tgacggtgtc gccagacggg tcgctgtgcg
cgtccggcgg caaggacggc gcggcgctgc tgtgggacct gagcaccggc gagcagctgt
                                                                      4080
                                                                      4140
tcaagatcaa cgtggagtcg cccatcaacc agatcgcctt ctcgcccaac cgcttctgga
                                                                      4200
tgtgcgtcgc gacggagagg tccctgtccg tgtacgacct ggagagcaag gctgtgattg
cggagctgac gccggacggc gcgaagccgt ccgagtgcat ctccattgcc tggtccgccg
                                                                      4260
acggcaacac tctgtactcc ggtcacaagg acaacctgat ccgcgtgtgg tccatctccg
                                                                      4320
                                                                      4380
acqccqaqta aqaqctcgat gagtttggac aaaccacaac tagaatgcag tgaaaaaaat
                                                                      4440
gctttatttg tgaaatttgt gatgctattg ctttatttgt aaccattata agctgcaata
aacaagttaa caacaacaat tgcattcatt ttatgtttca ggttcagggg gaggtgtggg
                                                                      4500
                                                                      4560
aggtttttta aagcaagtaa aacctctaca aatgtggtag aattcagggg gagacccaat
                                                                      4620
tcqtaatcat qqtcatagct gtttcctgtg tgaaattgtt atccgctcac aattccacac
                                                                      4680
aacatacgag ccggaagcat aaagtgtaaa gcctggggtg cctaatgagt gagctaactc
                                                                      4740
acattaattq cqttqcgctc actgcccgct ttccagtcgg gaaacctgtc gtgccagctg
                                                                      4791
cattaatgaa tcggccaacg cgcggggaga ggcggtttgc gtattgggcg c
<210>
<211>
       11
<212>
       PRT
       Human immunodeficiency virus type 1, TAT peptide
<213>
<400>
       2
Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg
<210>
       3
<211>
       7
       PRT
<212>
<213>
       Simian virus 40, NLS peptide
<400>
       3
Pro Lys Lys Arg Lys Val
<210>
       20
<211>
<212>
       DNA
<213>
       Unknown
<220>
<223>
       ODN 1
<220>
       modified_base
<221>
<222>
       (12)..(12)
```

J

```
NHL-NP-46 Sequence Listing (revision 1).ST25
<223> xT = Thymin modified with a reactive amino group
<400> 4
                                                                        20
gggagtccag ttttctggac
<210>
      20
<211>
<212>
      DNA
<213> Unknown
<220>
<223> ODN 2
<400> 5
                                                                        20
aggggtccag ttttctggac
<210>
<211>
       33
<212> DNA
<213> Unknown
<220>
<223> 1. PCR: Primer left
<400> 6
                                                                        33
ttatatggta ccatgaacat acgagggtca cct
<210> 7
<211> 42
<212> DNA
<213> Unknown
<220>
<223> 1. PCR: Primer right
ttatatgagc tcagaagaca cggacaggga cctcttccgt cg
                                                                        42
<210>
      8
<211> 33
<212> DNA
<213> Unknown
<220>
<223> 2. PCR: Primer left
<400> 8
                                                                        33
ttatatggta ccatgaacat acgagggtca cct
<210>
       9
<211>
       33
<212>
      DNA
<213>
      Unknown
<220>
<223> 2. PCR: Primer right
<400> 9
```